

Art Unit: \*\*\*

CLMPTO

09/760,189

06/16/03

RC

09/27/05

1. (Amended) A fluid dispenser, comprising:
  - a. a housing having an internal chamber, said housing comprising:
    - (1) an inlet for receiving a fluid product into said housing and being in fluid communication with said internal chamber; and
    - (2) a discharge port through which fluid product may exit said housing, said discharge port having an interior surface and being in fluid communication with said internal chamber; and
  - b. a valving rod disposed in said housing and being movable within said internal chamber between an open position, to which fluid product may flow through said internal chamber and exit said housing via said discharge port, and a closed position, in which fluid product is substantially prevented from flowing through said internal chamber, said valving rod comprising:
    - (1) a central bore;
    - (2) at least one inlet for receiving a cleaning solvent, said inlet being in fluid communication with said bore, and
    - (3) one or more outlet ports in fluid communication with said bore, and either being capable of dispensing cleaning solvent radially outwards from said bore and against said interior surface of said discharge port when said valving rod is in said closed position to facilitate the removal of at least a portion of any fluid product or debris formed that may be in adherence with said interior surface of said discharge port.

2. The fluid dispenser of claim 1, wherein said housing has a longitudinal axis;
  - said bore of said valving rod is substantially aligned with said longitudinal axis; and
  - said valving rod translates between said open and closed positions along said longitudinal axis.

Claim 3 is canceled

BEST AVAILABLE COPY

Art Unit: \*\*\*

4. The fluid dispenser of claim 1, wherein said housing further comprises an internal reservoir to which cleaning solvent may be contained, said internal reservoir being in fluid communication with said at least one inlet into said central bore of said valving rod.
  5. The fluid dispenser of claim 4, wherein at least a portion of said valving rod is movable through said internal reservoir.
- 20
6. The fluid dispenser of claim 4, wherein said housing has at least one inlet in fluid communication with said internal reservoir so that cleaning solvent from an external source may be added to said reservoir as needed.
- 25
7. The fluid dispenser of claim 6, further including a mechanism to apply a pressure ranging from about 2 to about 12 psi to said internal reservoir.
- 
8. The fluid dispenser of claim 1, wherein said dispenser is adapted to dispense a fluid product extracted from polyols, isocyanates, and mixtures of polyols and isocyanates.
  9. The fluid dispenser of claim 4, wherein said cleaning solvent is selected from glycols, ethers, and mixtures of glycols and ethers.

BEST AVAILABLE COPY

Art Unit: \*\*\*

- 
- (10. (Amended) An apparatus for dispensing fluid into flexible containers and enclosing the fluid within the containers, comprising:
- a. a mechanism that conveys a web of film along a predetermined path of travel, said film web comprising two juxtaposed piles of plastic film that define a partially-formed flexible container;
  - b. a dispenser through which a fluid product may flow in predetermined amounts, said dispenser positioned adjacent the travel path of the film web such that said dispenser can dispense fluid product into the partially-formed flexible container, said dispenser comprising:
    - i) a housing having an internal chamber, said housing comprising:
      - ia) an inlet for receiving a fluid product into said housing and being in fluid communication with said internal chamber, and
      - ib) a discharge port through which fluid product may exit said housing, said discharge port having an interior surface and being in fluid communication with said internal chamber; and
      - ic) a valving rod disposed in said housing and being movable within said internal chamber between an open position, in which fluid product may flow through said internal chamber and out said housing via said discharge port, and a closed position, in which fluid product is substantially prevented from flowing through said internal chamber, said valving rod comprising:
        - ia) a central bore,
        - ib) at least one inlet for receiving a cleaning solvent, said inlet being in fluid communication with said bore, and
        - ic) one or more outlet ports in fluid communication with said bore, said outlet ports being capable of directing cleaning solvent radially outwards from said bore and against said interior surface of said discharge port;
  - c. one or more devices for sealing the piles of plastic film together to complete the partially-formed container, thereby enclosing the fluid product therein.
- 

11. The apparatus of claim 10, wherein:  
said dispenser housing has a longitudinal axis;  
said bore of said valving rod is substantially aligned with said longitudinal axis; and  
said valving rod translates between said open and closed positions along said longitudinal axis.

Claim 12 is canceled

BEST AVAILABLE COPY

Art Unit: \*\*\*

13. The apparatus of claim 10, wherein said dispenser housing further comprises an internal reservoir in which cleaning solvent may be contained, said internal reservoir being in fluid communication with said at least one outlet into said central bore of said valving rod.
14. The apparatus of claim 13, wherein at least a portion of said valving rod is movable through said internal reservoir.
15. The apparatus of claim 13, wherein said housing has at least one inlet in fluid communication with said internal reservoir so that cleaning solvent from an external source may be added to said reservoir as needed.
16. The apparatus of claim 15, further including a mechanism to apply a pressure ranging from about 2 to about 12 psi to said internal reservoir.
17. The apparatus of claim 10, wherein said dispenser is adapted to dispense a fluid product selected from polyols, isocyanates, and mixtures of polyols and isocyanates.
18. The apparatus of claim 10, wherein:  
said housing inlet in fluid communication with said internal chamber comprises a first inlet in fluid communication with a first fluid product comprising one or more polyols;  
said housing comprises a second inlet in fluid communication with said internal chamber and with a second fluid product comprising one or more isocyanates; and

BEST AVAILABLE COPY

Art Unit: \*\*\*

when said valving rod is in said open position, the polyols and isocyanates are moved to said internal chamber and dispensed into the partially-formed flexible container.

19. The apparatus of claim 13, wherein said cleaning solvent is selected from glycols, ethers, and mixtures of glycols and ethers.
20. A fluid dispenser, comprising:
  - a housing, comprising:
    - (1) an inlet for receiving a fluid product into said housing;
    - (2) an internal chamber disposed within said housing and being in fluid communication with said inlet; and
    - (3) a discharge port through which fluid product may exit said housing, said discharge port being in fluid communication with said internal chamber; and
    - (4) an internal reservoir in which cleaning solvent may be contained, said reservoir being disposed within said housing and positioned adjacent said internal chamber;
  - b. a valving rod disposed in said housing and movable within said internal chamber and said internal reservoir between an open position, in which fluid product may flow through said internal chamber and exit said housing via said discharge port, and a closed position, in which fluid product is substantially prevented from flowing through said internal chamber; and
  - c. a conduit providing fluid communication between said internal reservoir and said discharge port to deliver cleaning solvent to said discharge port, said conduit positioned externally of said internal chamber.

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**